

Remarks*Status*

Claims 42, 44-46, 48-60 and 62-73 were pending in the application and all the pending claims were rejected for the various reasons described in the Office Action and summarized below. The rejections are respectfully traversed for the reasons described below. Claims 42, 46, 52, 60, 66, 71 and 73 are the independent claims.

*Discussion*

The Examiner rejected claims 42, 44-46, 48-73 (it should be noted that claim 61 has previously been canceled) under 35 USC 103(a) as being unpatentable over *Davis* (USP 5,796,952), in view of *Tuzhilin* (USP 6,236,978) and further in view of *Alexander* (USP 6,177,931). The rejection is respectfully traversed. It is submitted that claims 42, 44-46, 48-60 and 62-73 are patentable over the cited references for at least the following reasons.

Independent claim 42 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. The subscriber interactions are processed in order to generate the subscriber profile. The subscriber profile identifies demographic characteristics about the subscriber. The processing includes applying heuristic rules that associate the subscriber interactions to demographic characteristics about the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 42. For example, none of the cited references disclose or suggest heuristic rules that associate the subscriber interactions to demographic characteristics, let alone applying the heuristic rules to the subscriber interactions in order to generate a subscriber profile that identifies demographic characteristics about the subscriber.

As defined in the application, the heuristic rules may be logical rules or may be rules expressed in terms of conditional probabilities. Fig 10A and the associated text from page 19,

line 30 – page 20, line 18 illustrate and describe exemplary logical heuristic rules. For example, the heuristic rules equate an individual watching the soap opera “Days of our lives” with a housewife (1050). The heuristic rules also equate higher frequency of channel changes to higher income, as illustrated a user who zaps once every 2 minutes and 42 seconds is associated with an income of greater than \$75,000 (1010). Fig. 10B and the associated text at page 20, lines 19 – 27 illustrate and describe exemplary probabilistic heuristic rules. The exemplary heuristic rules define probabilities of demographic make-up of a user based on the category of programming they are viewing. For example, the heuristic rules assign an individual watching the news a 40% probability of being over the age of 70, a 40% probability of making between \$50K - \$100K, a 50% of being a single member family, and a 70% chance of being female. It is clear that the exemplary heuristic rules described in the application are related to viewing characteristics (e.g., watching soap opera, watching the news) and predict demographic traits (e.g., housewife, 40% probability of income between \$50K - \$100K).

As illustrated in Fig. 12 of the application, the subscriber profile identifies demographic characteristics about the subscriber (e.g., age, gender). As illustrated, the profile includes a probabilistic distribution of the likelihood of the subscriber being within different demographic segments (e.g., 0-10, 10-18) for each demographic characteristic (e.g., age), though the claim clearly does not limit the scope thereto.

*Davis et al.* is directed to tracking interactions of users with an Internet ad (e.g., a banner ad that is presented on a particular website) and collecting and analyzing the interactions of multiple users in an effort to better target the ads. A tracking program is contained in the resource and is downloaded from the server hosting the resource to the client in order to track the interactions and report the interactions to a collection point (see summary). However, *Davis et al.* do not disclose heuristic rules, let alone heuristic rules that associate subscriber interactions to demographic characteristics, or applying the heuristic rules to subscriber interactions in order to generate a subscriber profile that identifies demographic characteristics about the subscriber, as required by claim 42. In fact, the Examiner acknowledges on page 4 of the Office Action that *Davis et al.* do “not disclose identifying subscriber demographics derived from heuristic rules, which process subscriber interactions”.

On page 4 of the Office Action, the Examiner relies on *Tuzhilin* for disclosing a system which "utilizes a number [of] heuristic rules to create a dynamic consumer profile, which tracks user interactions and traits ... the rules are retrieved and generated in order to determine the dynamic profile". The Examiner appears to assert that "(IF Sex='Male' and Shopping\_time='evening' and Day\_of\_week='weekday' and Purchase='Diapers' THEN Purchase='beer')", is a heuristic rule as recited in claim 42. On page 2 of the Office Action, in the response to arguments, the Examiner asserts that *Tuzhilin* "discloses use of 'fuzzy rules' in order to determine the types of purchases a user may make based on a number of known subscriber characteristics." The Examiner further asserts that since the rule (defined above) "is applied to men, it is disclosing a demographic trait, in this case, describing male purchasing behavior".

Initially the Applicant respectfully submits that the Examiner has provided no motivation to combine *Davis et al.* and *Tuzhilin*. On page 5 of the Office Action, the Examiner simply asserts that "it would have be obvious to use the rules and recommendation system of *Tuzhilin* ... to determine which advertisements or webpage a user has seen and read in order to more accurately create a user profile which is tailored to a user's interests" without providing any rationale for why it would be obvious, let alone any motivation for the combination. Moreover, it is submitted that neither reference provides any motivation for combining the two references. In fact, *Davis et al.* is directed toward tracking Internet interactions while *Tuzhilin* is directed to generating rules for one-on-one applications (such as purchasing history). There is clearly no support in either reference or in the Examiner's remarks that combining the two is possible or would provide any benefit. In fact, the user profile disclosed in *Tuzhilin* includes both a static profile (identifies demographic data (e.g., birthdate, sex)) and a dynamic profile (the rules). Accordingly, in order to combine the profiles (rules) of *Tuzhilin* to *Davis et al.* would require a static profile (demographic data) for the users of *Davis et al.* be available as opposed to being derived by the rules, as required by claim 42. Thus, the proposed combination would impact if not destroy the operation of either one or both of the systems defined in these references.

*Tuzhilin* is directed to a system that creates a user profile that includes a static profile (e.g., name, address) and a dynamic profile (e.g., rules/patterns associated with transactions made

by that specific user). A sample dynamic profile is "if user buys diapers while shopping on a weekday night, the user will likely also buy beer". A single user may not perform enough transactions, and thus generate enough rules, to be statistically significant so the system accordingly looks at the rules for multiple users within the system (referred to herein as "system rules"). The number of system rules is likely great and the quality and usefulness of individual rules may be questionable so that the system rules are aggregated together. The aggregated rules are then validated by an expert (which may be a user) for applicability to the user and only the validated rules are stored in the dynamic portion of the users profile. (See col. 3, line 30 – col. 4, line 67).

The static profiles can be used to further aggregate dynamic profiles so that an individual rule applies to a group of users. For example, if several rules have the form "(IF Shopping\_time='evening' and Day\_of\_week='weekday' and Purchase='Diapers' THEN Purchase= 'beer')" and the rules apply mostly to men (based on the static profiles) aggregating the rules to form a rule having the form "(IF Sex='Male' and Shopping\_time='evening' and Day\_of\_week='weekday' and Purchase='Diapers' THEN Purchase= 'beer')". (See col. 5, lines 31-62). The user profiles can be used to assist the user predict future transactions (e.g., estimate future purchasing needs).

As previously mentioned, the user profile of *Tuzhilin* includes a static profile (demographics) and a dynamic profile (rules/patterns). The dynamic profile is used to predict future transactions and the rules within this portion may be generated based on data (e.g., demographics) from the static profile. However, there is clearly no disclosure, teaching, or suggestion of a subscriber profile that identifies demographic characteristics about the subscriber based on subscriber interactions to advertisements presented, let alone the subscriber profile being generated by applying heuristic rules (that associate the subscriber interactions to demographic characteristics) to the subscriber interactions to create a subscriber profile that identifies demographic characteristics about the subscriber, as required by claim 42.

In response to the Examiners assertion on page 2 that since the rule (related to shopping and beer that has been defined multiple times above) "is applied to men, it is disclosing a demographic trait, in this case, describing male purchasing behavior", the Applicant submits that

this is clearly croneous. That is, even assuming that the Examiners characterization of this rule as a male purchasing behavior is correct (without conceding or acknowledging such), the rule clearly is not used to associate the interactions of the user with demographics, as required by claim 42. Moreover, as the static profile of *Tuzhilin* already contains demographics there is not motivation in *Tuzhilin* to utilize the rules (dynamic profile) in such a fashion.

Accordingly, even assuming arguendo that the Examiners motivation to combine *Davis et al.* and *Tuzhilin* is sufficient (without conceding or acknowledging that such motivation is sufficient), the combination of the two would not result in a method as recited in claim 42.

On page 5 of the Office Action, the Examiner asserts that *Alexender et al.* "discloses a viewer profiling system which monitors a users viewing habits and internet browsing, and is able to determine demographics regarding a user, such as marital status, number of children ... (column. 28, lines 13-67, column 30, line 1-44)". On page 3 of the Office Action, in the response to arguments section, the Examiner asserts that *Alexender et al.* "discloses the that the EPG may determine a users favourite team (age, marital status), based off the games (programs, web surfing habits) a user watches (column 29, lines 56-67), Alexander must use some type of heuristic rule, as the EPG believes that this is a users favourite team, even though a user has not confirmed it, by entering the information".

Initially the Applicant respectfully submits that the Examiner has provided no motivation to combine *Alexender et al.* with any combination of *Davis et al.* and *Tuzhilin*. On page 5 of the Office Action, the Examiner simply asserts that "it would have be obvious to use the rules and recommendation system of *Tuzhilin* and viewing habits of and profiling features of *Alexander* in order to utilize the interaction data of *Davis* to determine which advertisements or webpage a user has seen and read in order to more accuratcly create a user profile which is tailored to a user's interests" without providing any rational for why it would be obvious, let alone any motivation for the combination. Moreover, it is submitted that none of the reference provide any motivation for combining them in any reasonable fashion. In fact, there is no support in the references or in the Examiners remarks that combining the references is possible or would provide any benefit

*Alexander et al.* is directed to an interactive electronic program guide (EPG) system that monitors a viewers interactions with an EPG and/or a TV and analyzes the data in order to determine the type of programs that the viewer may wish to watch and/or record so that the EPG can be customized accordingly. The data collected about the viewer (viewer profile information) is analyzed by a simple statistical analysis to determine, for example, the number of times: the viewer interacted with the EPG is activated during a viewing session; performed particular types of interactions with the EPG; watched a particular channel; and watched, recorded, or scheduled a program with a particular theme, subject or having a particular actor (see col. 29, lines 14-55). Based on the collected and analyzed data the system can determine viewer preferences, such as, determining that a viewer likes a particular basketball team based on the fact that they watch that team often (see col. 29, lines 56-67). Further analysis can be performed to determine viewer characteristics by comparing, for example, various interactions of the viewer during programs identified within the viewer preferences to programs not identified in the viewer preferences. The viewer characteristics may include, for example, attention span, general interest in product advertisements, interest in future programs, and correlation of impulse buying to price ranges (see col. 30, lines 1-29).

The Applicant respectfully submits that there is clearly no disclosure or suggestion of relating the television viewing habits to demographic characteristics through the use of heuristic rules, as required by claim 42. Moreover, the Examiners assertion on page 2 of the Office Action that "Alexander must use some type of heuristic like rule" is not applicable to claim 42 because the context in which the Applicant makes this assertion is with regard to sports teams, which are clearly not demographics. Therefore, even if the Examiners assertion with regard to heuristic rules being used is true (without conceding or acknowledging such) *Alexander et al.* do not disclose heuristic rules relating viewer transactions to demographic traits, as required by claim 42. Moreover, the use of heuristic rules is not inherent in *Alexander et al.* as it would appear the Examiner is asserting. That is, while it is possible that *Alexander et al.* retrieves heuristic rules that associate subscriber interactions to advertisements with demographic characteristics about a subscriber and applies these rules to subscriber interactions to generate a subscriber profile ("Viewer Preferences" or "Viewer Characteristics"), that is *but one possibility* and is clearly *not necessarily present*. For example, the data may be entered (e.g., "The EPG requests that the

viewer provide certain profile information ... the viewer's top favorite channels; the viewer's favorite types of channels, and the times which the viewer is most likely to watch television" (col. 28, lines 12-21); "the EPG is capable of distinguishing between individual viewers ... each viewer has an individual PIN or other identification number ... each viewer uses an individualized remote" (col. 28, lines 23-29)).

Accordingly, even assuming *arguendo* that the Examiners motivation to combine *Alexander et al.* with *Davis et al.* and *Tuzhilin* (alone or in combination with one another) is sufficient (without conceding or acknowledging that such motivation is sufficient), the combination of the three would not result in a method as recited in claim 42.

The Examiner is clearly reconstructing the prior art with the knowledge of the current invention, as recited in claim 42. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. For at least the above noted reasons claim 42 is submitted to be patentable over the cited references. Claims 44-45 depend from claim 42 and are therefore submitted to be patentable over the cited references for at least the same reasons and for the further features recited therein. Accordingly, the rejection of claims 42, 44 and 45 should be withdrawn.

Claim 46 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. Heuristic rules associated with the subscriber interactions are retrieved. The heuristic rules associate the subscriber interactions to demographic characteristics about the subscriber. The heuristic rules are applied to the subscriber interactions in order to generate the subscriber profile. The subscriber profile identifies demographic characteristics about the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 46. For example, none of the cited references disclose or suggest retrieving heuristic rules that associate the subscriber interactions to demographic characteristics, or applying the heuristic rules to the subscriber interactions in order to generate a subscriber profile that identifies demographic characteristics about the subscriber.

For at least similar reasons to those addressed above with respect to claim 42, the Applicant submits that the Examiner is clearly reconstructing the prior art with the knowledge of the current invention, as recited in claim 46. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. Accordingly, claim 46 is submitted to be patentable over the cited references. Claims 48-51 depend from claim 46 and are therefore submitted to be patentable over the cited references for at least the same reasons and for the further features recited therein. Accordingly, the rejection of claims 46 and 48-51 should be withdrawn.

Claim 52 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. Heuristic rules associated with the subscriber interactions are retrieved. The heuristic rules associate the subscriber interactions to characteristics about the subscriber and predict demographic characteristics about the subscriber. The heuristic rules are applied to the subscriber interactions in order to generate the subscriber profile. The subscriber profile identifies characteristics about the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 52. For example, none of the cited references disclose or suggest retrieving heuristic rules that associate the subscriber interactions to subscriber characteristics and predict demographic characteristics, or applying the heuristic rules to the subscriber interactions in order to generate a subscriber profile.

For at least similar reasons to those addressed above with respect to claim 42, the Applicant submits that the Examiner is clearly reconstructing the prior art with the knowledge of the current invention, as recited in claim 52. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. Accordingly, claim 52 is submitted to be patentable over the cited references. Claims 53-59 depend from claim 52 and are therefore submitted to be patentable over the cited references for at least the same reasons and for the further features recited therein. Accordingly, the rejection of claims 52-59 should be withdrawn.



Claim 60 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. The subscriber interactions are processed in order to define traits associated with the subscriber interactions. The heuristic rules are applied to the traits in order to generate the subscriber profile. The heuristic rules associate the traits to demographic characteristics about the subscriber and the subscriber profile identifies demographic characteristics about the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 60. For example, none of the cited references disclose or suggest retrieving heuristic rules that associate subscriber interaction traits to demographic characteristics, or applying the heuristic rules to the subscriber interaction traits in order to generate a subscriber profile that identifies demographic characteristics about the subscriber.

For at least similar reasons to those addressed above with respect to claim 42, the Applicant submits that the Examiner is clearly reconstructing the prior art with the knowledge of the current invention, as recited in claim 60. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. Accordingly, claim 60 is submitted to be patentable over the cited references. Claims 62-65 depend from claim 60 and are therefore submitted to be patentable over the cited references for at least the same reasons and for the further features recited therein. Accordingly, the rejection of claims 60 and 62-65 should be withdrawn.

Claim 66 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. The subscriber interactions are processed in order to define traits associated with the subscriber interactions. The traits associated with the subscriber interactions include at least some subset of viewing percentage per product and brand and average volume per product and brand. The heuristic rules are applied to the traits in order to generate the subscriber profile. The heuristic rules associate the traits to characteristics about the subscriber and the subscriber profile identifies characteristics about the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 66. For example, none of the cited references disclose or suggest retrieving heuristic rules that associate subscriber interaction traits to subscriber characteristics, or applying the heuristic rules to the subscriber interaction traits in order to generate the subscriber profile.

For at least similar reasons to those addressed above with respect to claim 42, the Applicant submits that the Examiner is clearly reconstructing the prior art with the knowledge of the current invention, as recited in claim 66. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. Accordingly, claim 66 is submitted to be patentable over the cited references. Claims 67-70 depend from claim 66 and are therefore submitted to be patentable over the cited references for at least the same reasons and for the further features recited therein. Accordingly, the rejection of claims 66-70 should be withdrawn.

Claim 71 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. Information associated with the advertisements presented is retrieved. The information is applied to the subscriber interactions to generate interaction data. A set of rules associated with at least a subset of the interaction data is retrieved. The set of rules relates at least one aspect of the interaction data to at least one demographic characteristic. The set of rules is applied to the interaction data in order to generate the subscriber profile. The subscriber profile includes at least one demographic characteristic about the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 71. For example, none of the cited references disclose or suggest retrieving rules that associate interaction data to demographic characteristics, or applying the heuristic rules to the interaction data in order to generate a subscriber profile that identifies demographic characteristics about the subscriber.

For at least similar reasons to those addressed above with respect to claim 42, the Applicant submits that the Examiner is clearly reconstructing the prior art with the knowledge of

the current invention, as recited in claim 71. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. Accordingly, claim 46 is submitted to be patentable over the cited references. Claim 72 depends from claim 71 and is therefore submitted to be patentable over the cited references for at least the same reasons and for the further features recited therein. Accordingly, the rejection of claims 71 and 72 should be withdrawn.

Claim 73 is directed to a method for monitoring a subscribers interactions with advertisements in order to generate a subscriber profile. The method includes monitoring subscriber interactions to advertisements presented. Information corresponding to the advertisements presented is retrieved. The information includes descriptions of at least one aspect of the advertisements presented. A first representation of the subscriber is created based on the subscriber interactions and the information. A set of rules associated with at least a subset of the first representation is retrieved. The set of rules relates at least one aspect of the first representation to at least one demographic parameter. The set of rules are applied to the first representation in order to generate the subscriber profile. The subscriber profile defines at least a second representation of the subscriber.

It is submitted that none of the cited prior art disclose or suggests the method of claim 73. For example, none of the cited references disclose or suggest retrieving rules that associate at least one aspect of a first representation to at least one demographic parameter, or applying the rules to the first representation in order to generate a subscriber profile that identifies a second representation of the subscriber.

For at least similar reasons to those addressed above with respect to claim 42, the Applicant submits that the Examiner is clearly reconstructing the prior art with the knowledge of the current invention, as recited in claim 73. Such hindsight reconstruction of the prior art violates the spirit of 35 U.S.C. §103. Accordingly, claim 73 is submitted to be patentable over the cited references and the rejection accordingly should be withdrawn.

**Conclusion**

For the foregoing reasons, Applicant respectfully submits that claims 42, 44-46, 48-60 and 62-73 are in condition for allowance. Accordingly, early allowance of claims 42, 44-46, 48-60 and 62-73 is earnestly solicited.

Respectfully submitted,



Date: 4/22/04

Douglas J. Ryder, Esquire  
Reg. No. 43,073

6206 Kellers Church Road  
Pipersville, PA 18947  
Phone: (215) 766-2100  
Fax: (215) 766-2920  
dryder@techpats.com